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REMARKS/ARGUMENTS

Reconsideration is requested in view of the following remarks. Claim 1 has been editorially revised. Support for the editorial revision of claim 1 can be found in Figures 3-4, 7-8 and 10-11, among other places. Claims 1-15 remain under consideration in the present application.

Claim Rejections – 35 USC §112

Claims 1-15 are rejected under 35 U.S.C. §112, first paragraph, as not sufficiently defining the structure of the teeth. Claim 1 has been editorially revised to now more clearly define the structure of the teeth. This objection is therefore overcome, and the objection should be withdrawn.

Claim Rejections – 35 USC §102

Claims 1-3 and 7 are rejected under 35 U.S.C. §102(b) as anticipated by Mischler et al. (US 4,255,684). Applicants respectfully traverse this rejection.

Claim 1 is directed to a method for fabricating a machine stator. The method requires (a) positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein each tooth extends radially inward toward the center of the stator such that the first end is closer to the center of the stator than the second end; and

(b) directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth.

Mischler et al. disclose a laminated motor stator structure with molded composite pole pieces. The stator structure employs a substantially identical pair of laminated cores, wherein each core is constructed of horizontally nested layers of flat strip that may be configured with straight legs connected via a yoke member. The core sections are then assembled coplanar to one another to yield a magnetic structure with inwardly projecting contacting pairs of straight legs, which are the stator poles. A molded

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magnetic composite pole piece is mounted on and holds together every contacting pair of core straight legs. Each molded magnetic composite pole piece disclosed by Mischler et al. disadvantageously extends radially outward toward the outer periphery of the stator yoke member between the innermost tip of each leg and the outmost tip portion of each leg.

In contradistinction, claim 1 requires directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke such that each composite tooth tip does not extend between the inner first end and the outer second end of its corresponding tooth. The claimed composite tooth tips therefore advantageously do not penetrate into the stator yoke slot defined between the corresponding tooth and an adjacent tooth as seen for one embodiment in Figure 4. This is clearly different from the invention of Mischler et al. that disclose magnetic composite pole pieces mounted on and holding together every contacting pair of core straight legs by molding the magnetic composite pole pieces to extend along the outer sides between the two ends of the respective straight legs and into the slot opening areas defined between the respective straight legs.

Thus, Mischler et al. neither teach nor suggest composite tooth tips that contact respective teeth of a laminated stator yoke subsequent to positioning pre-wound stator windings around the respective teeth of the laminated stator yoke such that each composite tooth tip does not extend between the first end and the second end of its corresponding tooth, as required by claim 1, and such as seen in particular embodiments illustrated in Figures 3-4, 7-8 and 10-11.

The composite pole pieces disclosed by Mischler et al. do not correspond to the composite tooth tips as recited in claim 1. The invention of claim 1 advantageously allows the same volume of pre-wound stator windings to be fit into smaller slots between the teeth. Because the composite pole pieces disclosed by Mischler et al. consume a portion of the slot space between the legs, the composite pole pieces disclosed by Mischler et al. cannot provide the same advantages achievable using the method of claim 1. The claimed composite tooth tips that each does not extend between the ends of its corresponding tooth are therefore clearly different from the legs disclosed by Mischler et

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al. having composite pole pieces that extend between the ends of the corresponding legs to consume a portion of the slot space between the legs.

Nowhere do Mischler et al. teach or suggest positioning pre-wound stator windings around respective teeth of a laminated stator yoke; and directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke such that each composite tooth tip does not extend between the inner first end and the outer second end of its corresponding tooth.

For at least these reasons, claim 1 is patentable over Mischler et al. Claims 2-3 and 7 are patentable since they depend from claim 1 that is patentable.

Claim Rejections – 35 USC §103

Claim 2 is rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Applicants' admitted prior art (APA). Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claim 1-3 and 7 under 35 U.S.C. §102(b). The admitted prior art neither discloses nor suggests positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein each tooth extends radially inward toward the center of the stator such that the first end is closer to the center of the stator than the second end; and directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth.

Claim 2 is therefore patentable since it depends from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Claim 4 is rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Satomi (JP7336992). Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claims 1-3 and 7. Satomi neither teaches nor suggests positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein

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each tooth extends radially inward toward the center of the stator such that the first end is closer to the center of the stator than the second end; and directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth. Satomi does not remedy the deficiencies of Mischler et al.

For at least these reasons, claim 4 is patentable over the cited art, alone or in combination, since claim 4 depends from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Crabb (US 3,862,492). Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claims 1-3 and 7. Crabb does not remedy the deficiencies of Mischler et al. Crabb does not teach or suggest a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein each tooth extends radially inward toward the center of the stator such that the first end is closer to the center of the stator than the second end; and directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth.

For at least these reasons, claims 5 and 6 are patentable over the cited art, alone or in combination, since claims 5 and 6 depend ultimately from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Claims 8-10 are rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Heidrich (US20020149282). Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claims 1-3 and 7. Heidrich does not remedy the deficiencies of Mischler et al. Heidrich does

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not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein each tooth extends radially inward toward the center of the stator such that the first end is closer to the center of the stator than the second end; and directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth.

For at least these reasons, claims 8-10 are patentable over the cited art, alone or in combination, since claims 8-10 depend ultimately from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Claim 11 is rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Kliman (US 6,274,962). Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claim 1-3 and 7. Kliman does not remedy the deficiencies of Mischler et al. Kliman does not teach or disclose directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. Kliman does teach the pre-molding of tooth tips and then subsequently attaching the pre-molded tooth tips to pole tooth members. For at least these reasons, claim 11 is patentable over the cited art, alone or in combination, since claim 11 depends from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Claims 12-15 are rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. and Kliman in view of Heidrich. Applicants respectfully traverse this rejection for at least the same reasons discussed above regarding the rejections of claims 1-3 and 7. The cited art, alone or in combination, does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, each tooth having a first end and a second end, wherein each tooth extends radially inward toward the center of the stator such that the first end is closer to

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the center of the stator than the second end; and directly molding composite tooth tips into contact with the first end of respective teeth of the laminated stator yoke, such that each composite tooth tip does not extend in a radially outward direction toward the outer periphery of the stator yoke between the first end and the second end of its corresponding tooth.

Heidrich does not remedy the deficiencies of Mischler et al. and Kliman. For at least these reasons, claims 12-15 are patentable over the cited art, alone or in combination, since claims 12-15 depend ultimately from claim 1 that is allowable. Applicants do not concede the correctness of the rejection.

Favorable reconsideration in the form of a Notice of Allowance is requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at (507) 351-4450.

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PATENT TRADEMARK OFFICE

Respectfully submitted,

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